

Appl. No. 10/707,274
Amdt. dated 01/11/2006
Reply to Office action of 10/17/2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. - 30. (canceled)

31. (new): A sleeve assembly for a well logging tool of the type having a conductive mandrel and an antenna array disposed around the mandrel, the sleeve assembly comprising:
a sleeve having an outer surface and an inner surface, the sleeve adapted to be disposed over the antenna array such that the outer surface is directed outward from the mandrel; and
an electrode disposed within a hole formed through the sleeve and adapted to conductively connect to the mandrel, the electrode having an external section that is larger than a base section, the external section positioned proximate the outer surface.

32. (new): The sleeve assembly of claim 31, further including a wrap disposed about the base section.

33. (new): The sleeve assembly of claim 31, further including a filler positioned between the electrode and the sleeve.

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34. (new): The sleeve assembly of claim 32, further including a filler positioned between the sleeve and the electrode and the wrap.

35. (new): The sleeve assembly of claim 31, wherein the hole is formed through a non-conductive material of the sleeve.

36. (new): The sleeve assembly of claim 32, wherein the hole is formed through a non-conductive material of the sleeve.

37. (new): The sleeve assembly of claim 34, wherein the hole is formed through a non-conductive material of the sleeve.

38. (new): A sleeve assembly for a well logging tool of the type having a conductive mandrel and an antenna array disposed around the mandrel, the sleeve assembly comprising:
a sleeve having an outer surface and an inner surface, the sleeve adapted to be disposed over the antenna array such that the outer surface is directed outward from the mandrel; and
an electrode disposed within a hole formed through the sleeve and adapted to conductively connect to the mandrel, the electrode including an external metallic button positioned proximate the outer surface, a base metallic button positioned proximate the inner surface and a conductor connecting the external button and the base button.

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39. (new): The sleeve assembly of claim 38, wherein the conductor has a substantially smaller diameter than the external and base buttons.
40. (new): The sleeve assembly of claim 38, further including a filler disposed between the sleeve and the external and base buttons.
41. (new): The sleeve assembly of claim 38, wherein the hole is formed through a non-conductive material of the sleeve.
42. (new): The sleeve assembly of claim 39, wherein the conductor is a metallic wire.
43. (new): The sleeve assembly of claim 39, wherein the conductor is a metallic rod.
44. (new): The sleeve assembly of claim 40, wherein the filler is an epoxy.
45. (new): The sleeve assembly of claim 38, wherein the hole is formed through a non-conductive material of the sleeve and the conductor has a substantially smaller diameter than the external and base buttons.
46. (new): The sleeve assembly of claim 45, further including a filler disposed between the sleeve and the external and base buttons.

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47. (new): A sleeve assembly for a well logging tool of the type having a conductive mandrel and an antenna array disposed around the mandrel, the sleeve assembly comprising:
a sleeve having an outer surface and an inner surface, the sleeve adapted to be disposed over the antenna array such that the outer surface is directed outward from the mandrel; and
an electrode disposed within a hole formed through the sleeve and adapted to conductively connect to the mandrel, the electrode including an external button having a top surface positioned proximate the outer surface, the top surface having at least one slot formed thereacross dividing the top surface into interconnected finger electrodes.
48. The sleeve assembly of claim 47, wherein the hole includes an opening formed through the outer surface and a recess formed beneath the opening, the outer button disposed in the recess.
49. (new): The sleeve assembly of claim 48, wherein the outer button has a rectangular shape.
50. (new): The sleeve assembly of claim 48, wherein the outer button has a square shape.

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51. (new): The sleeve assembly of claim 47, wherein the hole is formed through a non-conductive material of the sleeve.
52. (new): The sleeve assembly of claim 47, further including a filler positioned between the electrode and the sleeve.
53. (new): The sleeve assembly of claim 47, wherein the hole is formed through a non-conductive material and further including a filler positioned between the electrode and the non-conductive material.
54. (new): The sleeve assembly of claim 48, wherein the hole is formed through a non-conductive material and further including a filler positioned between the electrode and the non-conductive material.
55. (new): The sleeve assembly of claim 47, wherein the electrode is a T-shaped member and the external button is larger than a base section.
56. (new): The sleeve assembly of claim 48, wherein the electrode is a T-shaped member and the external button is larger than a base section.
57. (new): The sleeve assembly of claim 47, wherein the electrode further includes a base section connected to the external button by a conductor having a substantially reduced diameter.

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58. (new): The sleeve assembly of claim 48, wherein the electrode further includes a base section connected to the external burton by a conductor having a substantially reduced diameter.

59. (new): The sleeve assembly of claim 56, wherein the hole is formed through a non-conductive material and further including a filler positioned between the electrode and the non-conductive material.

60. (new): The sleeve assembly of claim 58, wherein the hole is formed through a non-conductive material and further including a filler positioned between the electrode and the non-conductive material.